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REMARKS

Applicants request that the spelling of the first named applicant be corrected from "Antica" to "Antika".

35 USC §112

Deetman shows in Table 11 several hydraulic fluids. Applicants discovered that the Hyjet IVA formulation listed in Table 11 will not meet performance requirements at high pressure. Claim 1 has been amended by adding limitations from the dependent claims to better differentiate the claimed invention's erosion inhibitor and monoepoxide acid scavenger from the listed Hyjet IVA's erosion inhibitor and diepoxide acid scavenger. Claims 2-19, as directly or indirectly dependent on claim 1, are similarly limited. The as amended claims now differentiate between claimed phosphate ester-based fluids that perform at above 4,000 psi compared to phosphate ester-based fluids that do not adequately perform at above 4,000 psi. No new matter has been added since all the limitations have been copied from existing dependent claims.

35 USC §103

The Examiner has rejected claims 1-19 under 35 USC 103(a) over Deetman (US Pat. No. 5,464,551).

Applicants have found that Hyjet IV fluids do not meet performance requirements for operation at 4,000 psi, while Hyjet IV+ (also called Hyjet IV plus) fluids can meet performance requirements when operated at over 4,000 psi and even over 5,000 psi. In Table 11, Deetman discloses a Hyjet IV fluid in the same class of his other fluids. Deetman does not show or suggest any different pressure performance between Hyjet IV and his other fluids. Deetman certainly did not expect high pressure performance since

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only Applicants have found that some of his fluids are not compatible with high pressure systems.

Deetman worked for and assigned his rights to Solutia. After filing the Deetman patent, Solutia gave a talk on the same subject at the Symposium on Aerospace Fluid Power, Actuation and Control Technologies (SAE Committee A-6) in Palm Springs, CA on October 14, 1998. Applicants enclose the handout from this October 14, 1998 presentation.

The present invention shows that Hyjet IVA+ will operate above 4,000 psi and even above 5,000 psi. However, Solutia taught on page 3 titled "State of the Art," that Hyjet IVA+ only can be used for up to 3,000 psi operation. This teaches away from the present invention.

Furthermore, on page 3 titled "State of the Art", Solutia taught that Skydrol LD-4 (which appears in Table 11 of Deetman) and even newer "state of the art" fluids are to be only used for up to 3,000 psi operation. On page 6 titled "High Pressure Considerations," Solutia taught in section VI that Solutia believed that the phosphate ester aviation hydraulic fluids were at their viscosity operational limits at 3,000 psi. These statements also teach away from the present invention, since no one at the time would have expected that some of these fluids could be used above 4,000 psi when Solutia was limiting their use to 3,000 psi.

The attached Solutia handout shows that Deetman and Solutia taught away from high pressure aviation fluid applications. They merely designed a composition for use in 3,000 psi systems. The Solutia handout further shows how Solutia avoided high pressures because of perceived erosion and shear issues. Only the present invention found that some of the fluids could be made to meet performance requirements for high pressure applications.

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Also, the dependent claims further distinguish preferred formulations for high pressure applications. Deetman did not disclose all of the claimed formulations or even the effect of different additives on pressure limitations.

Applicants believe that the present invention is not obvious over Deetman. Reconsideration of the application as amended is respectfully requested.

Respectfully submitted,

Charles J. Brumlik

CHARLES J. BRUMLIK

Attorney for Applicants

Registration No. 42,367

Telephone Number: (908) 730-3634

Facsimile Number: (908) 730-3649

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ExxonMobil Research and Engineering Company
P. O. Box 900
Annandale, New Jersey 08801-0900

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